ROAD Process

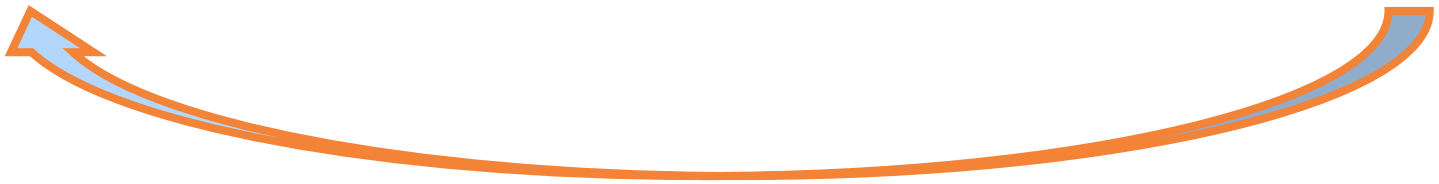
(**R**isks and **O**ptions **A**ssessment for **D**ecision-making)

The Risks and Options Assessment for Decision-Making (ROAD) process enables decision-makers to understand and manage complex risks across connected food-energy-environment-water systems.

1. Define Scope & Causal model

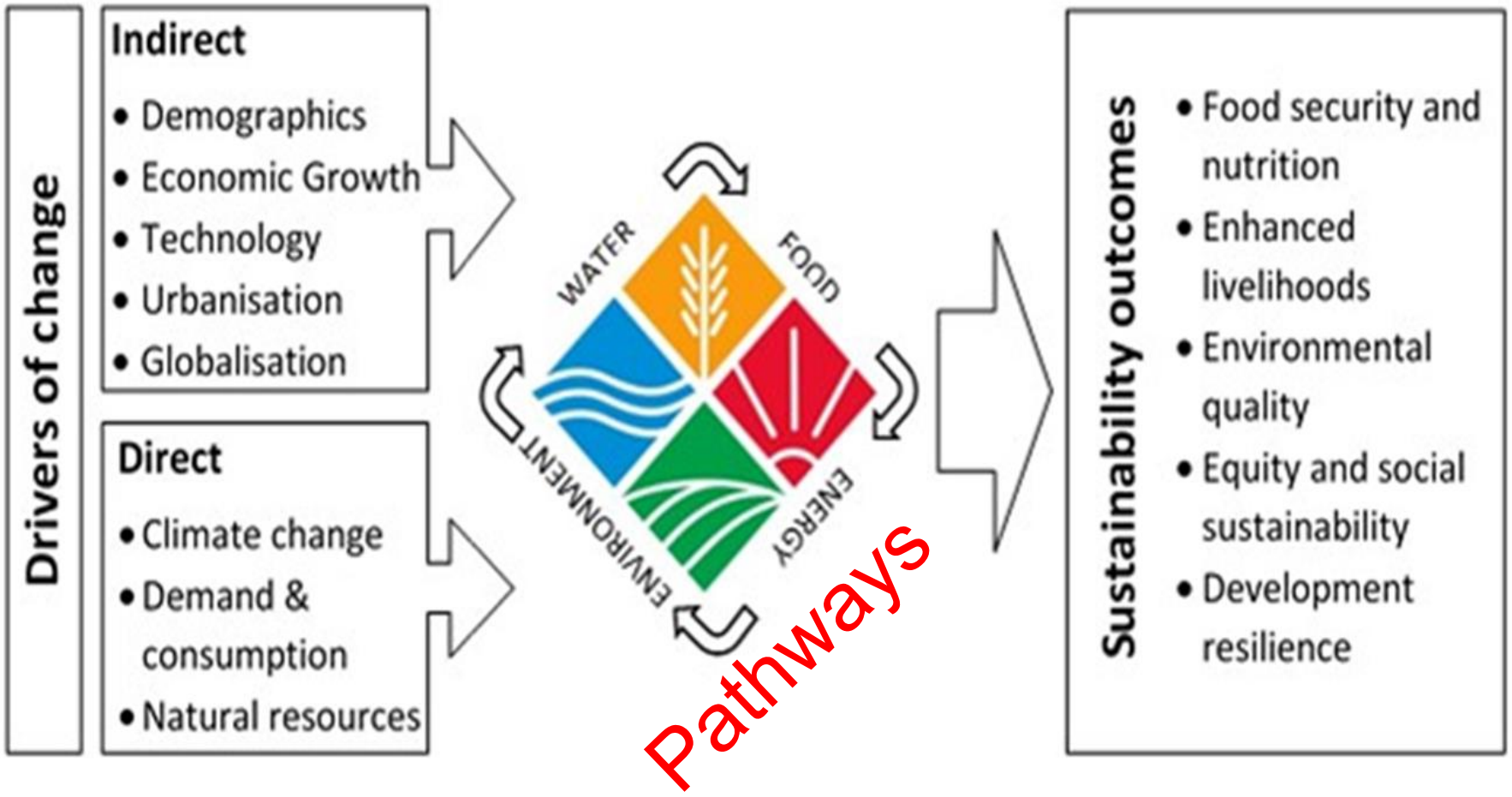
2. Evaluate risks and options + Document Decisions

3. Implement and evaluate decisions + Document results

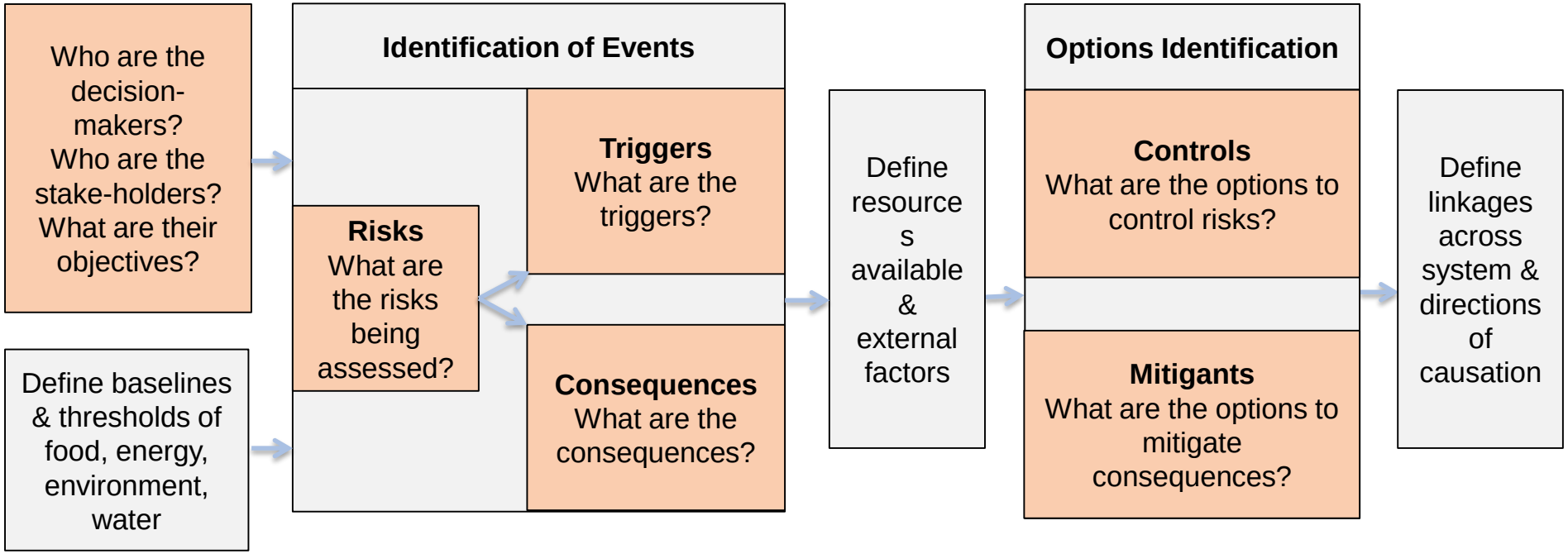


FE2W Network

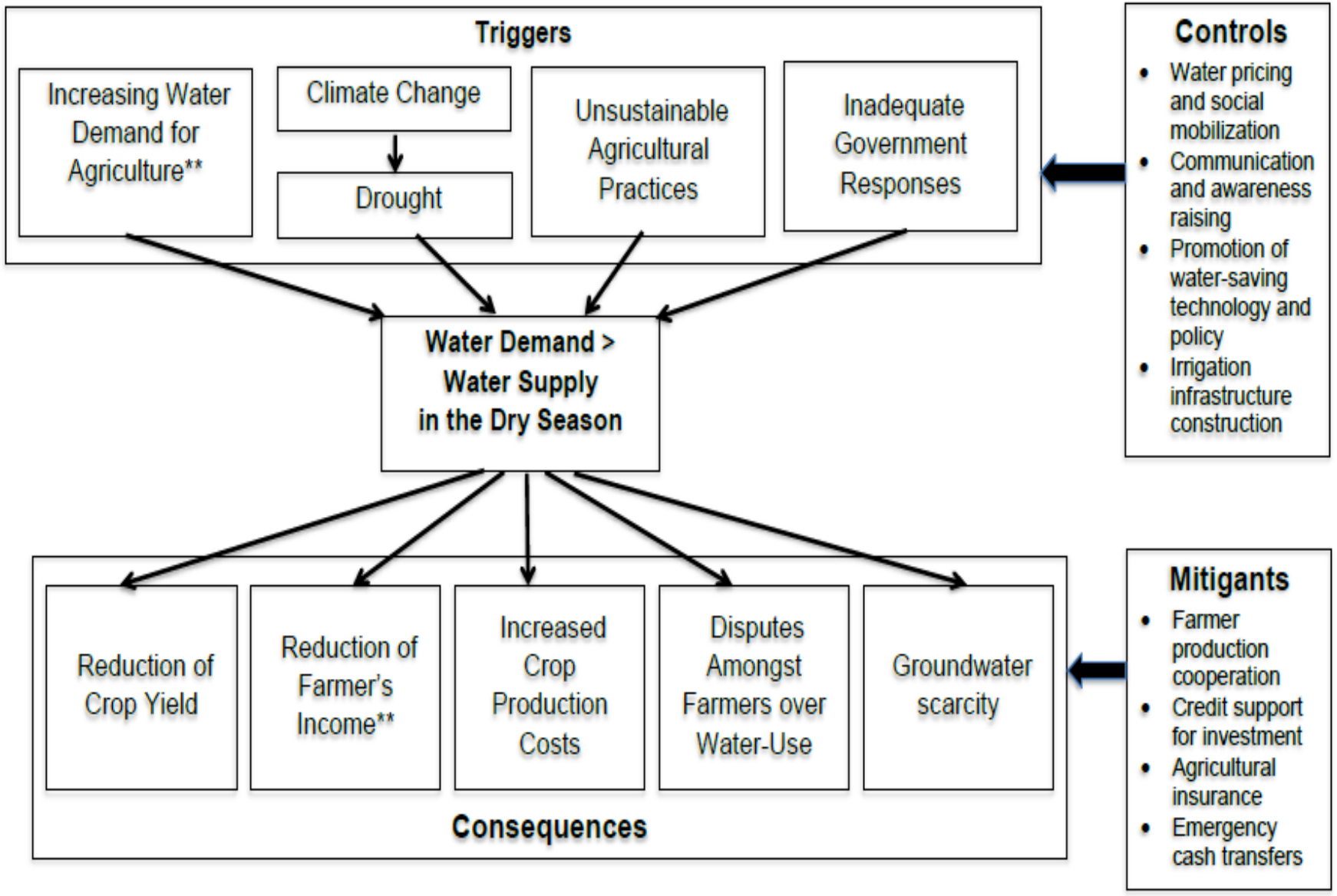
Drivers and Outcomes



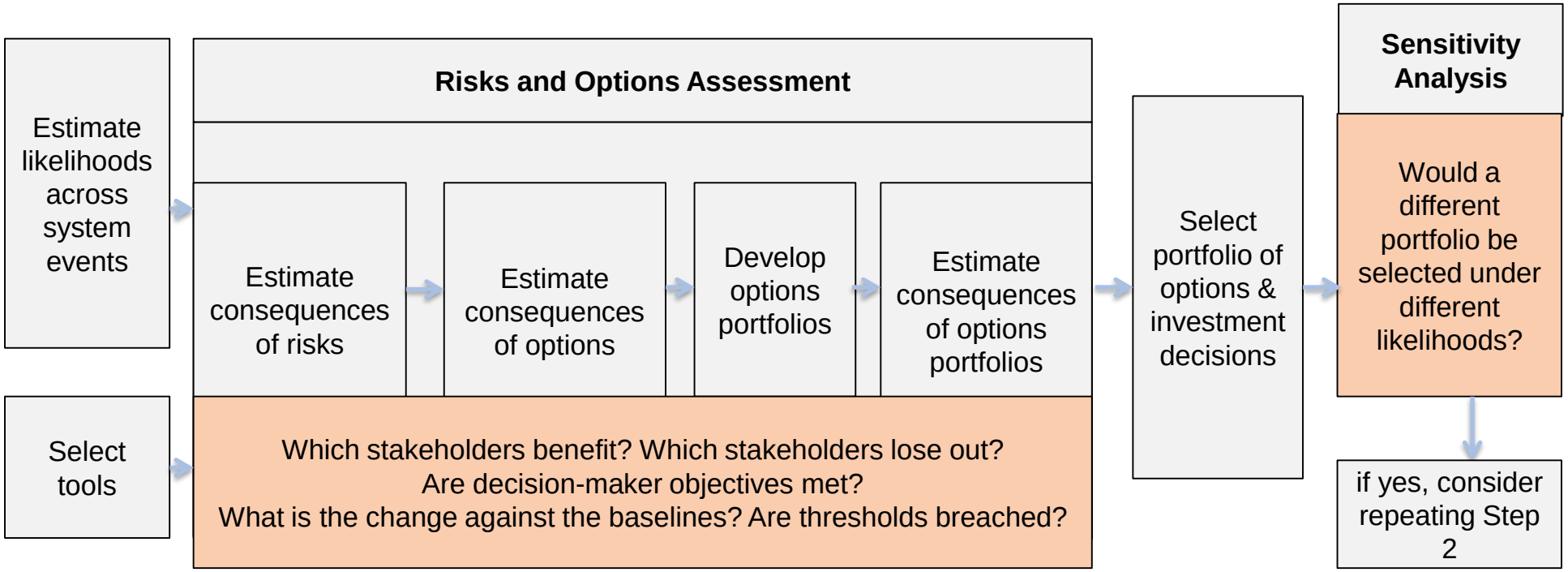
1. Define Scope of Decision-Making & Assessment



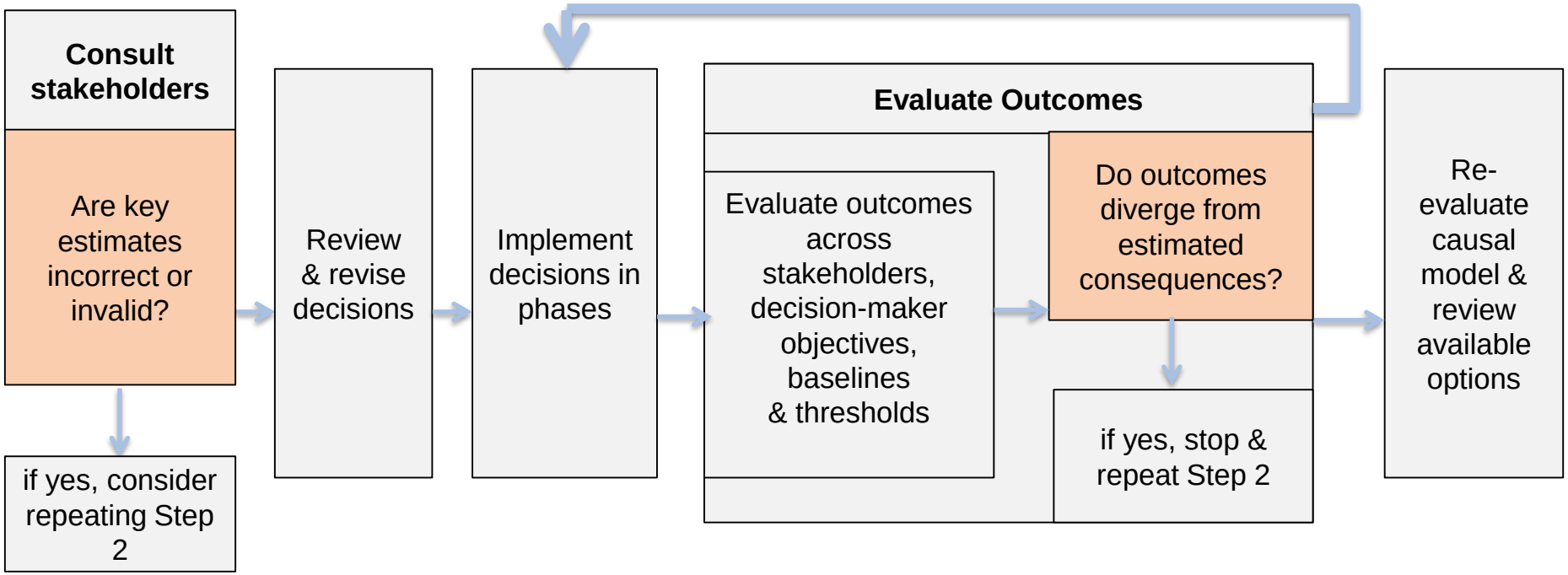
Risk Model


Triggers
Increasing Water Demand for Agriculture**
Climate Change
Drought
Unsustainable Agricultural Practices
Inadequate Government Responses
Controls
Water pricing and social mobilization
Communication and awareness raising
Promotion of water-saving technology and policy
Irrigation infrastructure construction
Water Demand > Water Supply in the Dry Season
Reduction of Crop Yield
Reduction of Farmer's Income**
Increased Crop Production Costs
Disputes Amongst Farmers over Water-Use
Groundwater scarcity
Consequences
Mitigants
Farmer production cooperation
Credit support for investment
Agricultural insurance
Emergency cash transfers

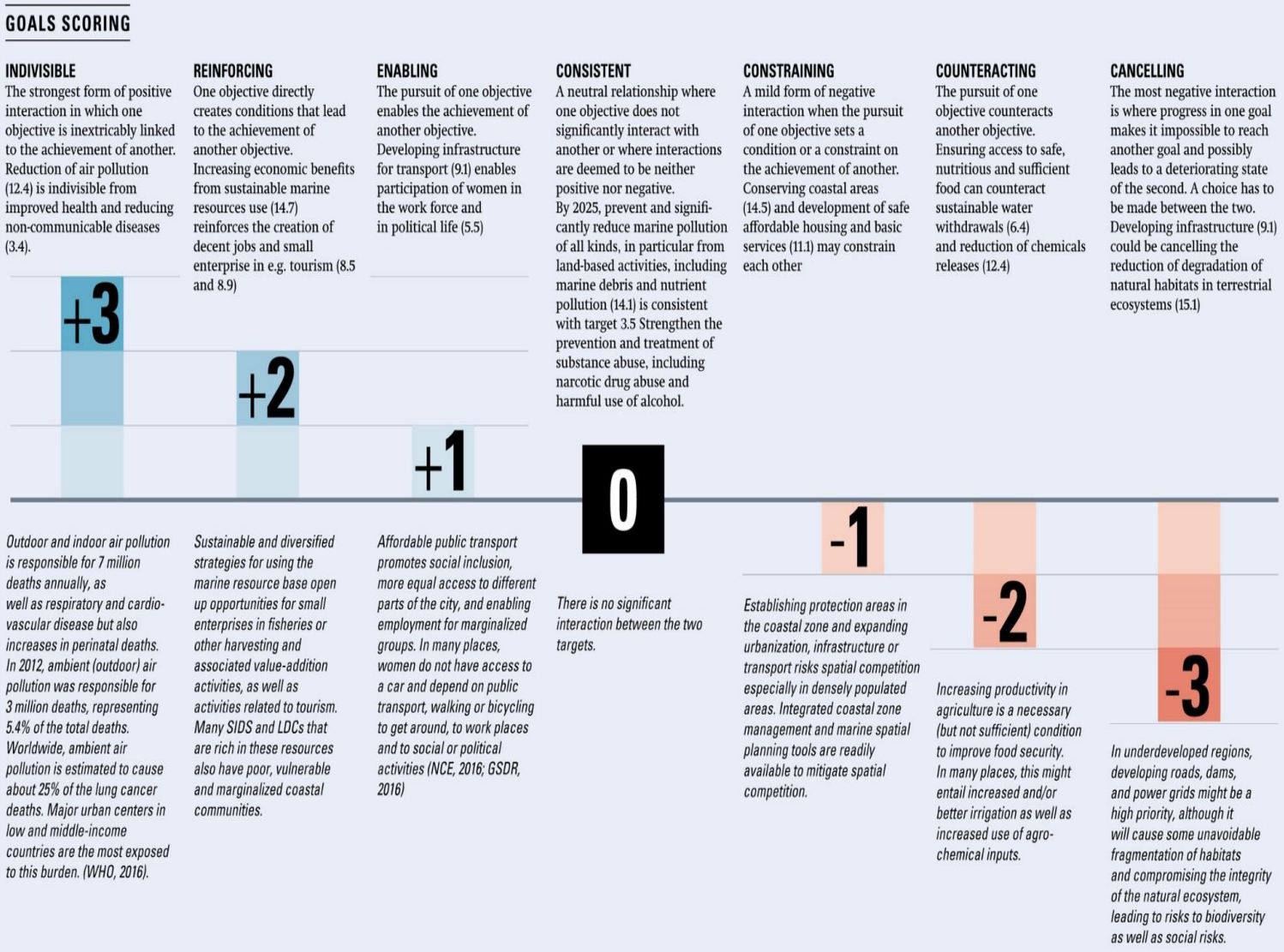
2. Assess Risks & Options



3. Implement & Evaluate Decisions



Scoring according to their impacts on the objectives



Going beyond synergies and trade-offs: a seven-point scale

- Negative interactions: cancelling (-3), counteracting (-2), constraining (-1)
- Neutral interaction: consistent
- Positive interactions: enabling (+1), reinforcing (+2) and indivisible (+3)

Nilsson, M., D. Griggs and M. Visbeck, 2016. Map the interactions between Sustainable Development Goals. Nature, 534:320-322.

Interaction	Name	Explanation	Example
+3	Indivisible	Inextricably linked to the achievement of another goal.	Ending all forms of discrimination against women and girls is indivisible from ensuring women's full and effective participation and equal opportunities for leadership.
+2	Reinforcing	Aids the achievement of another goal.	Providing access to electricity reinforces water-pumping and irrigation systems. Strengthening the capacity to adapt to climate-related hazards reduces losses caused by disasters.
+1	Enabling	Creates conditions that further another goal.	Providing electricity access in rural homes enables education, because it makes it possible to do homework at night with electric lighting.
0	Consistent	No significant positive or negative interactions.	Ensuring education for all does not interact significantly with infrastructure development or conservation of ocean ecosystems.

Interaction	Name	Explanation	Example
–1	Constraining	Limits options on another goal.	Improved water efficiency can constrain agricultural irrigation. Reducing climate change can constrain the options for energy access.
–2	Counteracting	Clashes with another goal.	Boosting consumption for growth can counteract waste reduction and climate mitigation.
–3	Cancelling	Makes it impossible to reach another goal.	Fully ensuring public transparency and democratic accountability cannot be combined with national-security goals. Full protection of natural reserves excludes public access for recreation.

	Initial Score	Adjustment Measure	Final Score
Food Security			
Energy Security			
Water Security			
Environmental Protection			